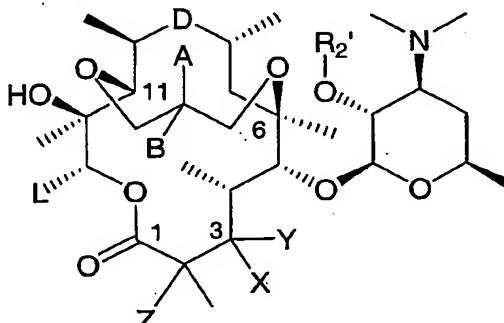


WHAT IS CLAIMED IS:

1. A compound of Formula I, or a pharmaceutically acceptable salt or ester or prodrug thereof:



5

wherein:

A is

10 i) -OH;
ii) -OR_p, where R_p is a hydroxy protecting group;
iii) -R₁, where R₁ is aryl, substituted aryl, heteroaryl, or substituted heteroaryl;
iv) -OR₁, where R₁ is as previously defined;
v) -R₂, where R₂ is
 (a) hydrogen;
 (b) halogen;
 (c) -C₁-C₆ alkyl containing 0, 1, 2, or 3 heteroatoms selected from O, S or N,
 optionally substituted with one or more substituents selected from halogen, aryl,
 substituted aryl, heteroaryl, or substituted heteroaryl;
 (d) -C₂-C₆ alkenyl containing 0, 1, 2, or 3 heteroatoms selected from O, S, or N,
 optionally substituted with one or more substituents selected from halogen, aryl,
 substituted aryl, heteroaryl, or substituted heteroaryl; or
 (e) -C₂-C₆ alkynyl containing 0, 1, 2, or 3 heteroatoms selected from O, S or N,
 optionally substituted with one or more substituents selected from halogen, aryl,
 substituted aryl, heteroaryl, or substituted heteroaryl;
vi) -OR₂, where R₂ is previously defined;
vii) -S(O)_nR₁₁, where n=0, 1 or 2, and R₁₁ is R₁ or R₂, where R₁ and R₂ are as previously
 defined;

5

- viii) -NHC(O)R₁₁, where R₁₁ is as previously defined;
- ix) -NHC(O)NHR₁₁, where R₁₁ is as previously defined;
- x) -NHS(O)R₁₁, where R₁₁ is as previously defined;
- xi) -NR₁₄R₁₅, where R₁₄ and R₁₅ are each independently R₁₁, where R₁₁ is as previously defined; or
- xii) -NHR₃, where R₃ is an amino protecting group;

B is

10

- i) hydrogen;
- ii) deuterium;
- iii) halogen;
- iv) -OH;
- v) -R₁, where R₁ is as previously defined;
- vi) -R₂, where R₂ is as previously defined; or

15

- vii) -OR_p, where R_p is as previously defined, provided that when B is halogen, -OH or OR_p, A is R₁ or R₂, where R₁ and R₂ are previously defined;

or, alternatively, A and B taken together with the carbon atom to which they are attached are

20

- i) C=O;
- ii) C(OR₂)₂, where R₂ is as previously defined;
- iii) C(SR₂)₂, where R₂ is as previously defined;
- iv) C[-O(CH₂)_m]₂, where m=2 or 3;
- v) C[-S(CH₂)_m]₂, where m is as previously defined;
- vi) C=CHR₁₁, where R₁₁ is as previously defined;

25

- vii) C=N-O-R₁₁, where R₁₁ is as previously defined;
- viii) C=NNHR₁₁, where R₁₁ is as previously defined;
- ix) C=NNHC(O)R₁₁, where R₁₁ is as previously defined;
- x) C=NNHC(O)NHR₁₁, where R₁₁ is as previously defined;
- xi) C=NNHS(O)R₁₁, where R₁₁ is as previously defined;
- xii) C=NNHR₃, where R₃ is as previously defined; or

30

- xiii) C=NR₁₁, where R₁₁ is as previously defined;

L is

- i) -CH₃;
- ii) -CH₂CH₃;

- iii) $-\text{CH}(\text{OH})\text{CH}_3$;
- iv) $-\text{C}_1\text{-C}_6$ alkyl, optionally substituted with one or more substituents selected from aryl, substituted aryl, heteroaryl, or substituted heteroaryl;
- v) $-\text{C}_2\text{-C}_6$ alkenyl, optionally substituted with one or more substituents selected from aryl, substituted aryl, heteroaryl, or substituted heteroaryl; or
- 5 vi) $-\text{C}_2\text{-C}_6$ alkynyl, optionally substituted with one or more substituents selected from aryl, substituted aryl, heteroaryl, or substituted heteroaryl;

D is $-\text{CH}_2\text{N}(\text{Q})\text{-}$, $-\text{C}(\text{O})\text{N}(\text{R}')\text{-}$, or $-\text{C}(\text{OR}')=\text{N}\text{-}$, wherein R' is R_{11} as previously defined;

10

Q is

- i) hydrogen;
- ii) $-\text{C}_1\text{-C}_{12}$ -alkyl, $\text{C}_3\text{-C}_{12}$ -alkenyl, or $\text{C}_3\text{-C}_{12}$ -alkynyl, all optionally substituted with one, two or three substituents independently selected from:
 - 15 (a) halogen;
 - (b) $-\text{OR}_6$, wherein R_6 is selected from:
 - 1. hydrogen;
 - 2. $-\text{C}_1\text{-C}_{12}$ -alkyl containing 0, 1, 2, or 3 heteroatoms selected from O, S or N, optionally substituted with one, two, or three substituents independently selected from aryl, substituted aryl, heteroaryl, or substituted heteroaryl;
 - 3. aryl;
 - 4. substituted aryl;
 - 5. heteroaryl; and
 - 6. substituted heteroaryl;
- 20 (c) $-\text{NR}_4\text{R}_5$, where R_4 and R_5 are each independently R_6 , where R_6 is as previously defined, or in the alternative R_4 and R_5 , together with the atom to which they are attached, form a heterocycloalkyl or substituted heterocycloalkyl moiety;
- 25 (d) $-\text{N-O-R}_6$, where R_6 is as previously defined;
- (e) $-\text{R}_1$, where R_1 is as previously defined;
- (f) $-\text{C}_3\text{-C}_8$ -cycloalkyl;
- (g) substituted $-\text{C}_3\text{-C}_8$ -cycloalkyl;
- (h) heterocycloalkyl;

(i) substituted heterocycloalkyl;

(j) -NHC(O)R₆, where R₆ is as previously defined;

(k) -NHC(O)OR₇, where R₇ is selected from:

5 1. -C₁-C₁₂-alkyl containing 0, 1, 2, or 3 heteroatoms selected from O, S or N, optionally substituted with one, two, or three substituents independently selected from aryl, substituted aryl, heteroaryl, or substituted heteroaryl;

10 2. aryl;

 3. substituted aryl;

 4. heteroaryl; or

 5. substituted heteroaryl;

(l) -NHC(O)NR₄R₅, where R₄ and R₅ are as previously defined;

(m) -OC(O)NR₄R₅, where R₄ and R₅ are as previously defined;

(n) -OC(O)R₇, where R₇ is as previously defined;

15 (o) -OC(O)OR₇, where R₇ is as previously defined;

(p) -OC(O)NR₄R₅, where R₄ and R₅ are as previously defined,

(q) -C(O)R₆, where R₆ is as previously defined,

(r) -CO₂R₆, where R₆ is as previously defined, or

(s) -C(O)NR₄R₅, where R₄ and R₅ are as previously defined;

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X is hydrogen;

Y is

25 i) hydrogen;

 ii) -OH;

 iii) -OR_p, where R_p is as previously defined;

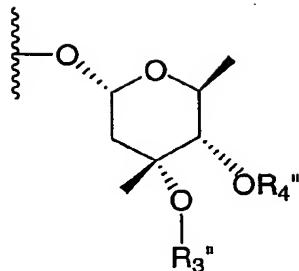
 iv) -OR₁₁, where R₁₁ is as previously defined;

 v) -OC(O)R₁₁, where R₁₁ is as previously defined;

 vi) -OC(O)NHR₁₁, where R₁₁ is as previously defined;

30 vii) -S(O)_nR₁₁, where n and R₁₁ are as previously defined;

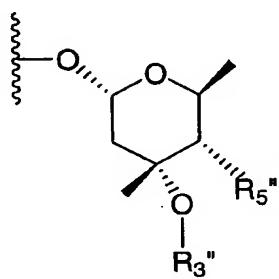
viii)



(1) where R_3'' is hydrogen or methyl; R_4'' is hydrogen or R_p , where R_p is as previously defined;

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ix)



(1) where R_3'' is as previously defined; R_5'' is NH_2 or R_{am} , where R_{am} is protected amino;

10 or, in the alternative, X and Y are combined together to form oxo;

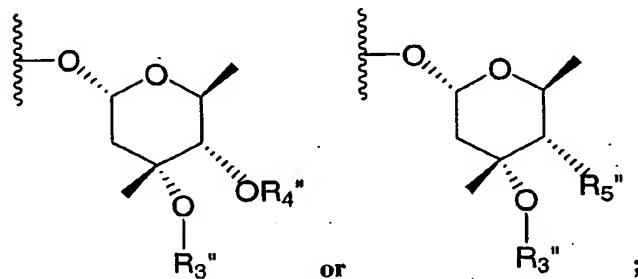
Z is

- i) hydrogen;
- ii) methyl; or
- 15 iii) halogen; and

R_2' is hydrogen or R_p , where R_p is as previously defined.

2. A compound according to claim 1, or a pharmaceutically acceptable salt or ester
20 or prodrug thereof, wherein D is $-CH_2N(Q)-$.

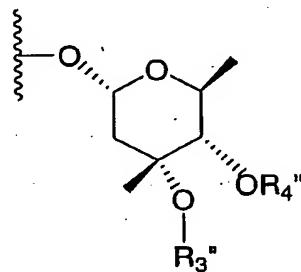
3. A compound according to claim 1, or a pharmaceutically acceptable salt or ester or prodrug thereof, wherein D is $-\text{CH}_2\text{N}(\text{Q})-$; X is hydrogen; and Y is



wherein R_3'' , R_4'' and R_5'' are each as defined in claim 1.

5

4. A compound according to claim 3, or a pharmaceutically acceptable salt or ester or prodrug thereof, wherein Y is



10

5. A compound according to claim 1, or a pharmaceutically acceptable salt or ester or prodrug thereof, wherein D is $-\text{N}(\text{Q})\text{CH}_2-$ and X and Y taken together are oxo.

6. A compound according to claim 1, or a pharmaceutically acceptable salt or ester or prodrug thereof, wherein D is $-\text{N}=\text{CH}(\text{OR}')-$, wherein R' is as defined in claim 1.

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7. A compound according to claim 1, or a pharmaceutically acceptable salt or ester or prodrug thereof, wherein D is $-\text{C}(\text{O})\text{N}(\text{R}')-$, wherein R' is as defined in claim 1.

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8. A compound according to claim 1, or a pharmaceutically acceptable salt or ester or prodrug thereof, selected from the group consisting of:

(i) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=CH₂, D is -CH₂N(Q)-, Q = X = Z = H, Y = OH, L = CH₂CH₃, R₂' = Ac;

(ii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=CH₂, D = -CHN(Q)-, Q = Z = H, X and Y taken together are oxo, L =

5 CH₂CH₃, R₂' = H;

(iii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached are C=CH₂, D = -CH₂N(Q)-, Q = CH₃, X = Z = H, Y = OH, L = CH₂CH₃, R₂' = H;

10 (iv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached are C=CH₂, D = -CH₂N(Q)-, Q = CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

(v) a compound of Formula I, wherein A = H, B = CH₃, D = -CH₂N(Q)-, Q = X = Z = H, Y = OH, L = CH₂CH₃, R₂' = Ac;

15 (vi) a compound of Formula I, wherein A = H, B = CH₃, D = -CH₂N(Q)-, Q = X = Z = H, Y = OH, L = CH₂CH₃, R₂' = H;

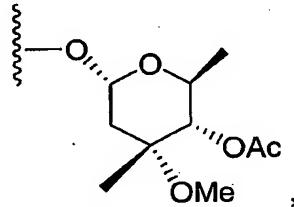
(vii) a compound of Formula I, wherein A = H, B = CH₃, D = -CHN(Q)-, Q = Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

(viii) a compound of Formula I, wherein A = H, B = CH₃, D = -CH₂N(Q)-, Q = CH₃, X = Z = H, Y = OH, L = CH₂CH₃, R₂' = H;

20 (ix) a compound of Formula I, wherein A = H, B = CH₃, D = -CHN(Q)-, Q = CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

(x) a compound of Formula I, wherein A = H, B = CH₃, D = -(C=NOH)-, X = Z = H, Y =

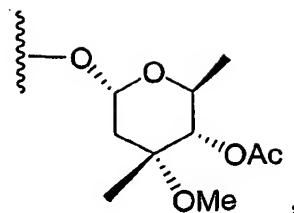
H, Y =



25 L = CH₂CH₃, R₂' = Ac;

(xi) a compound of Formula I, wherein A = H, B = CH₃, D = -C(=O)NH-, X =

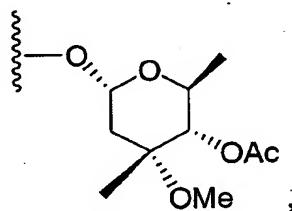
Z = H, Y =



L = CH₂CH₃, R₂' = Ac;

(xii) a compound of Formula I, wherein A = H, B = CH₃, D = -C(=O)NH-, X = Z =

5 H, Y =



L = CH₂CH₃, R₂' = H;

(xiii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = C=CH₂, D = -CHN(Q)-, Q = CH₂-Ph, Z = X = H, Y = OH, L = CH₂CH₃,

10 R₂' = H;

(xiv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = C=CH₂, D = -CH₂N(Q)-, Q = CH₂-Ph, Z = H, X and Y are taken together are oxo, L = CH₂CH₃, R₂' = H;

(xv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = C=CH₂, D = -CH₂N(Q)-, Q = CH₂-(2-pyridyl), Z = X = H, Y = OH, L = CH₂CH₃, R₂' = H;

(xvi) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = C=CH₂, D = -CH₂N(Q)-, Q = CH₂-(2-pyridyl), Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

20 (xvii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = C=CH₂, D = -CH₂N(Q)-, Q = CH₂-(3-quinolyl), Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

(xviii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH_2$, D = $-CH_2N(Q)$, Q = $CH_2-(3\text{-quinolyl})$, Z = H, X and Y taken together are oxo, L = CH_2CH_3 , R_{2'} = H;

5 (xix) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH_2$, D = $-CH_2N(Q)$, Q = $CH_2(CH=CH)\text{-Ph}$, Z = X = H, Y = OH, L = CH_2CH_3 , R_{2'} = H;

(xx) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH_2$, D = $-CHN(Q)$, Q = $CH_2(CH=CH)\text{-Ph}$, Z = H, X and Y taken together are oxo, L = CH_2CH_3 , R_{2'} = H;

10 (xxi) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH_2$, D = $-CH_2N(Q)$, Q = $CH_2CH=CH-(2\text{-pyridyl})$, Z = X = H, Y = OH, L = CH_2CH_3 , R_{2'} = H;

15 (xxii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH_2$, D = $-CHN(Q)$, Q = $CH_2CH=CH-(2\text{-pyridyl})$, Z = H, X and Y taken together are oxo, L = CH_2CH_3 , R_{2'} = H;

(xxiii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH_2$, D = $-CH_2N(Q)$, Q = $CH_2C\equiv C-(3\text{-quinolyl})$, Z = H, X and Y taken together are oxo, L = CH_2CH_3 , R_{2'} = H;

20 (xxiv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH_2$, D = $-CH_2N(Q)$, Q = $CH_2C\equiv C-(3\text{-quinolyl})$, Z = H, X and Y taken together are oxo, L = CH_2CH_3 , R_{2'} = H;

(xxv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH-CH=CH\text{-Ph}$, D = $-CH_2N(Q)$, Q = CH_3 , Z = H, X and Y taken together are oxo, L = CH_2CH_3 , R_{2'} = H;

25 (xxvi) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH-CH=CH-(3\text{-pyridyl})$, D = $-CH_2N(Q)$, Q = CH_3 , Z = H, X and Y taken together are oxo, L = CH_2CH_3 , R_{2'} = H;

(xxvii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH-CH=CH-(3\text{-quinolyl})$, D = $-CH_2N(Q)$, Q = CH_3 , Z = H, X and Y taken together are oxo, L = CH_2CH_3 , R_{2'} = H;

30 (xxviii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = $C=CH-(3\text{-quinolyl})$, D = $-CH_2N(Q)$, Q = CH_3 , Z = H, X and Y taken together are oxo, L = CH_2CH_3 , R_{2'} = H; and

(xxix) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached = C=CH-Ph, D = -CHN(Q)-, Q = CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H.

5 (xxx) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=CH₂, D is -CH₂N(Q)-, Q = X = Z = H, Y = OH, L = CH₂CH₂CH₃, R₂' = H;

(xxxi) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=CH₂, D is -CH₂N(Q)-, Q = CH₂CH₂CH₃, X = Z = H, Y = OH, L = CH₂CH₃, R₂' = H;

10 (xxxii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=CH₂, D is -CH₂N(Q)-, Q = CH₂CH₂CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

(xxxiii) a compound of Formula I, wherein A = H, B = CH₃, D = -CH₂N(Q)-, Q = CH₂CH₂CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₂CH₃, R₂' = H;

15 (xxxiv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=O, D is -CH₂N(Q)-, Q = Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

20 (xxxv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=O, D is -CH₂N(Q)-, Q = CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

(xxxvi) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=O, D is -CH₂N(Q)-, Q = CH₂CH₂CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

25 (xxxvii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-OH, D is -CH₂N(Q)-, Q = Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

(xxxviii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-OH, D is -CH₂N(Q)-, Q = CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

30 (xxxix) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-OH, D is -CH₂N(Q)-, Q = CH₂CH₂CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

(xli) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [5-(6-aminopyrid-2-yl)thien-2-yl]methyl, D is -CH₂N(Q)-, Q = Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

5 (xlii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [5-(6-aminopyrid-2-yl)thien-2-yl]methyl, D is -CH₂N(Q)-, Q = CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

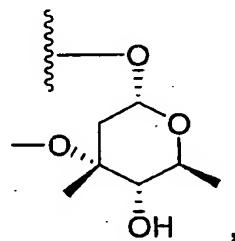
(xlii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [5-(6-aminopyrid-2-yl)thien-2-yl]methyl, D is -CH₂N(Q)-, Q = CH₂CH₂CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

10 (xlivii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [2-(pyrazol-1-yl)pyrid-5-yl]methyl, D is -CH₂N(Q)-, Q = Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

15 (xliii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [2-(pyrazol-1-yl)pyrid-5-yl]methyl, D is -CH₂N(Q)-, Q = CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

(xlv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = 5-[2-(pyrazol-1-yl)pyrid-5-yl]methyl, D is -CH₂N(Q)-, Q = CH₂CH₂CH₃, Z = H, X and Y taken together are oxo, L = CH₂CH₃, R₂' = H;

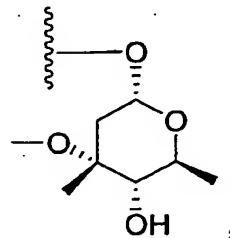
20 (xlii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=CH₂, D is -CH₂N(Q)-, Q = X = Z = H, Y =



L = CH₂CH₃, R₂' = H;

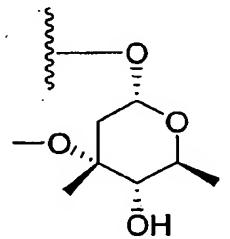
(xlvii) a compound of Formula I, wherein A and B taken together with the carbon

atom to which they are attached is $C=CH_2$, D is $-CH_2N(Q)-$, Q = CH_3 , X = Z = H, Y =



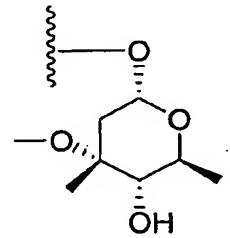
L = CH_2CH_3 , R_{2'} = H;

5 (xlviii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is $C=CH_2$, D is $-CH_2N(Q)-$, Q = $CH_2CH_2CH_3$, X = Z = H, Y =



L = CH_2CH_3 , R_{2'} = H;

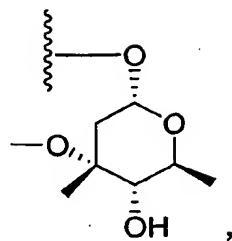
(xlii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is $C=N-O-R_{11}$, R₁₁ = [5-(6-aminopyrid-2-yl)thien-2-yl]methyl, D is 10 - $CH_2N(Q)-$, Q = X = Z = H, Y =



L = CH_2CH_3 , R_{2'} = H;

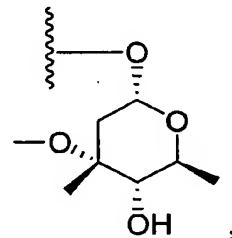
(I) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is $C=N-O-R_{11}$, R₁₁ = [5-(6-aminopyrid-2-yl)thien-2-yl]methyl,

D is $-\text{CH}_2\text{N}(\text{Q})-$, Q = CH_3 , X = Z = H, Y =



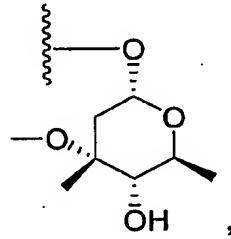
L = CH_2CH_3 , R_{2'} = H;

5 (ii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [5-(6-aminopyrid-2-yl)thien-2-yl]methyl, D is -CH₂N(Q)-, Q = $\text{CH}_2\text{CH}_2\text{CH}_3$, X = Z = H, Y =



L = CH_2CH_3 , R_{2'} = H;

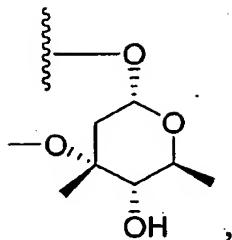
10 (iii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [2-(pyrazol-1-yl)pyrid-5-yl]methyl, D is -CH₂N(Q)-, Q = X = Z = H, Y =



L = CH_2CH_3 , R_{2'} = H;

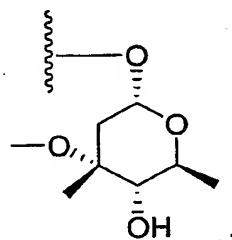
15 (iii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [2-(pyrazol-1-yl)pyrid-5-yl]methyl, D is

$-\text{CH}_2\text{N}(\text{Q})-$, Q = CH₃, X = Z = H, Y =



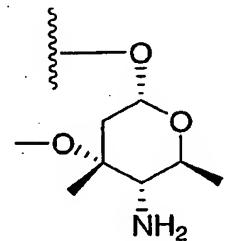
L = CH₂CH₃, R₂' = H;

5 (iv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [2-(pyrazol-1-yl)pyrid-5-yl]methyl, D is $-\text{CH}_2\text{N}(\text{Q})-$, Q = CH₂CH₂CH₃, X = Z = H, Y =



L = CH₂CH₃, R₂' = H;

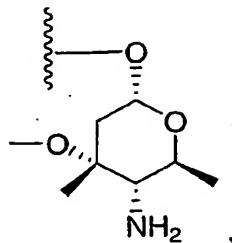
10 (iv) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [5-(6-aminopyrid-2-yl)thien-2-yl]methyl, D is $-\text{CH}_2\text{N}(\text{Q})-$, Q = X = Z = H, Y =



L = CH₂CH₃, R₂' = H;

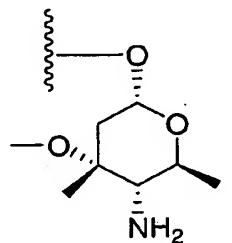
15 (lvi) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = 2-[5-(6-aminopyrid-2-yl)thien-2-

yl]methyl, D is $-\text{CH}_2\text{N}(\text{Q})-$, Q = CH₃, X = Z = H, Y =



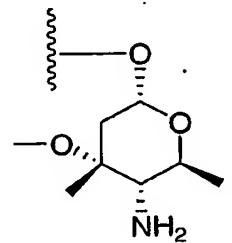
L = CH₂CH₃, R₂' = H;

5 (vii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [5-(6-aminopyrid-2-yl)thien-2-yl]methyl, D is -CH₂N(Q)-, Q = CH₂CH₂CH₃, X = Z = H, Y =



L = CH₂CH₃, R₂' = H;

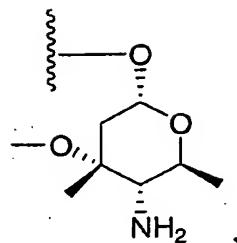
10 (viii) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = 5-[2-(pyrazol-1-yl)pyrid-5-yl]methyl, D is -CH₂N(Q)-, Q = X = Z = H, Y =



L = CH₂CH₃, R₂' = H;

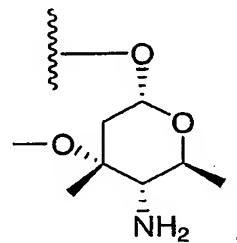
15 (ix) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [2-(pyrazol-1-yl)pyrid-5-yl]methyl, D is

-CH₂N(Q)-, Q = CH₃, X = Z = H, Y =



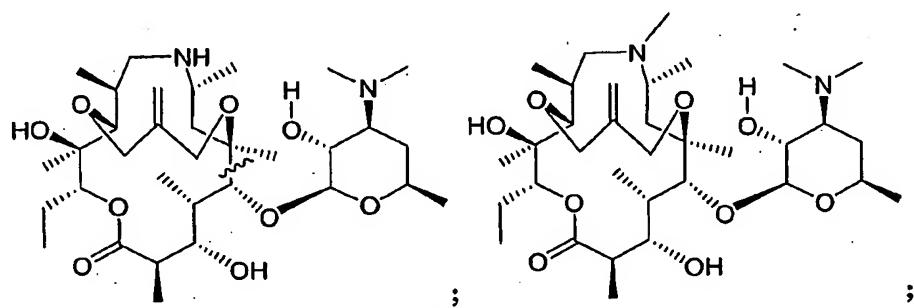
L = CH₂CH₃, R₂' = H; and

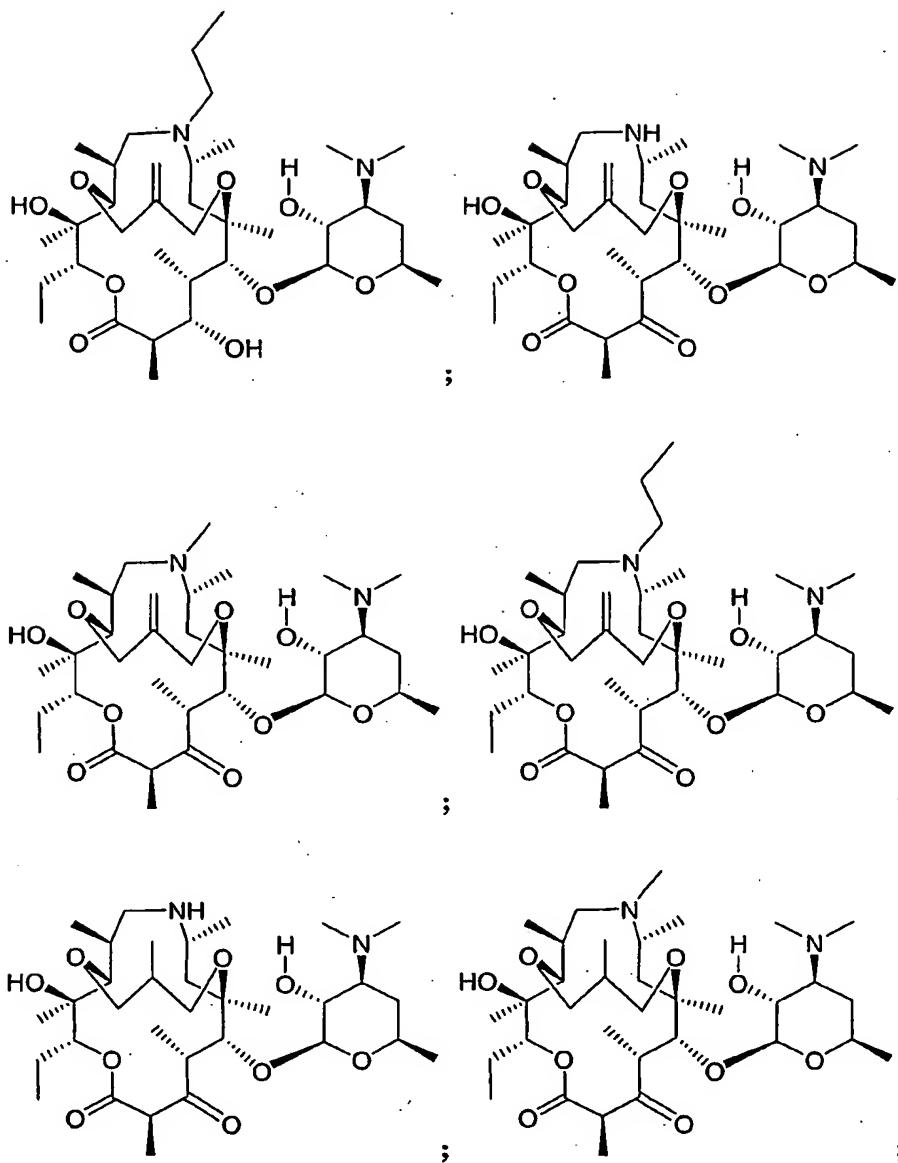
5 (Ix) a compound of Formula I, wherein A and B taken together with the carbon atom to which they are attached is C=N-O-R₁₁, R₁₁ = [2-(pyrazol-1-yl)pyrid-5-yl]methyl, D is -CH₂N(Q)-, Q = CH₂CH₂CH₃, X = Z = H, Y =

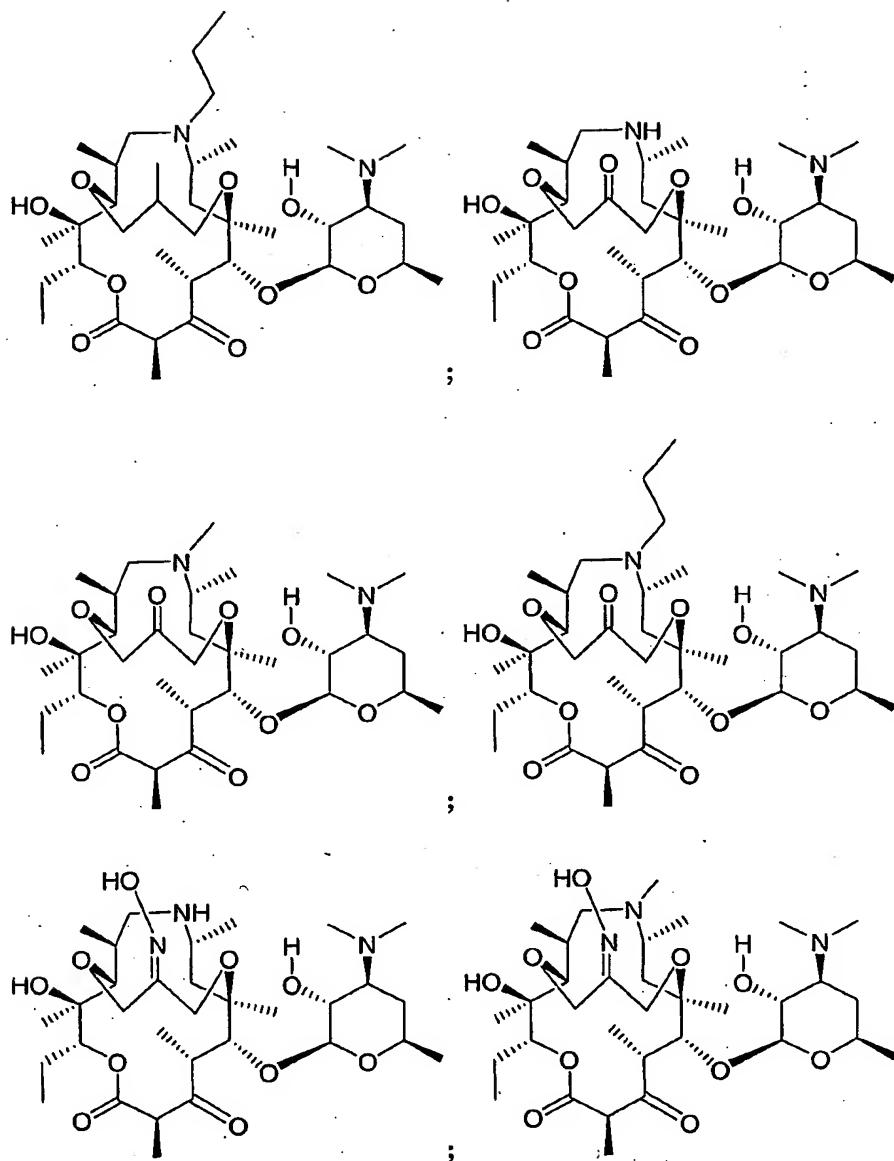


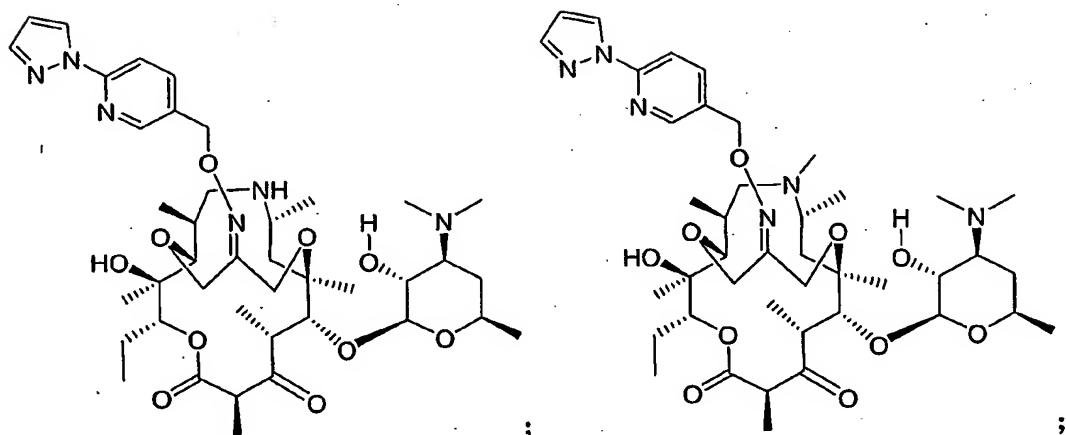
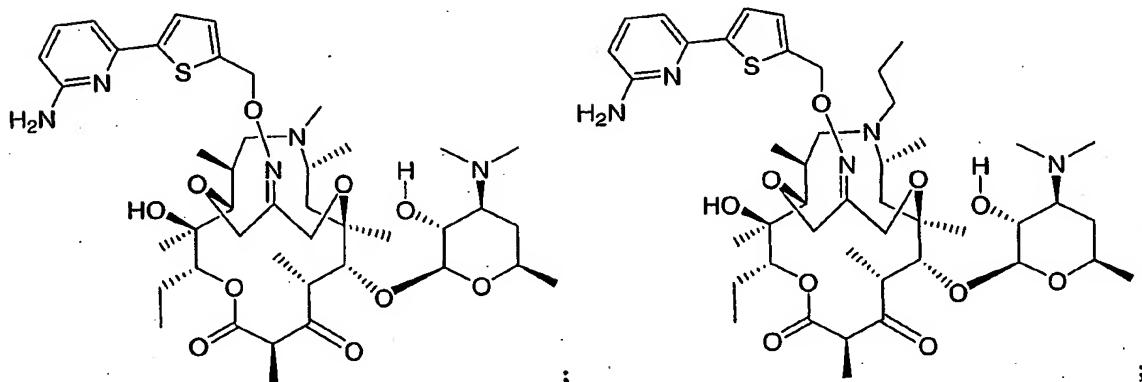
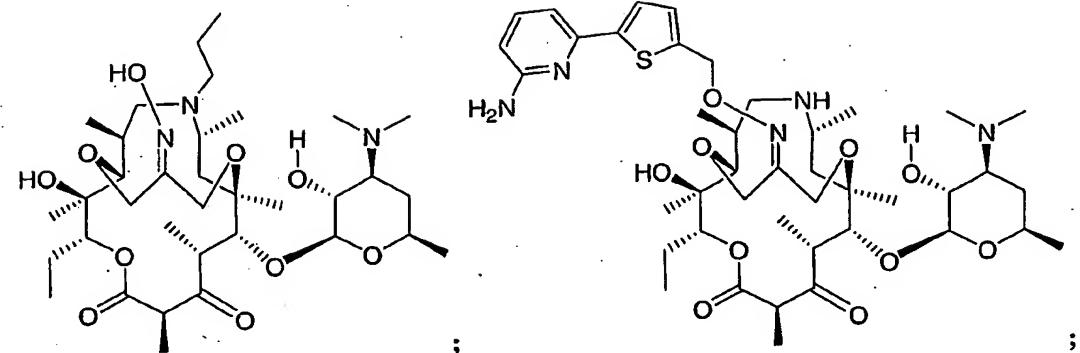
L = CH₂CH₃, R₂' = H.

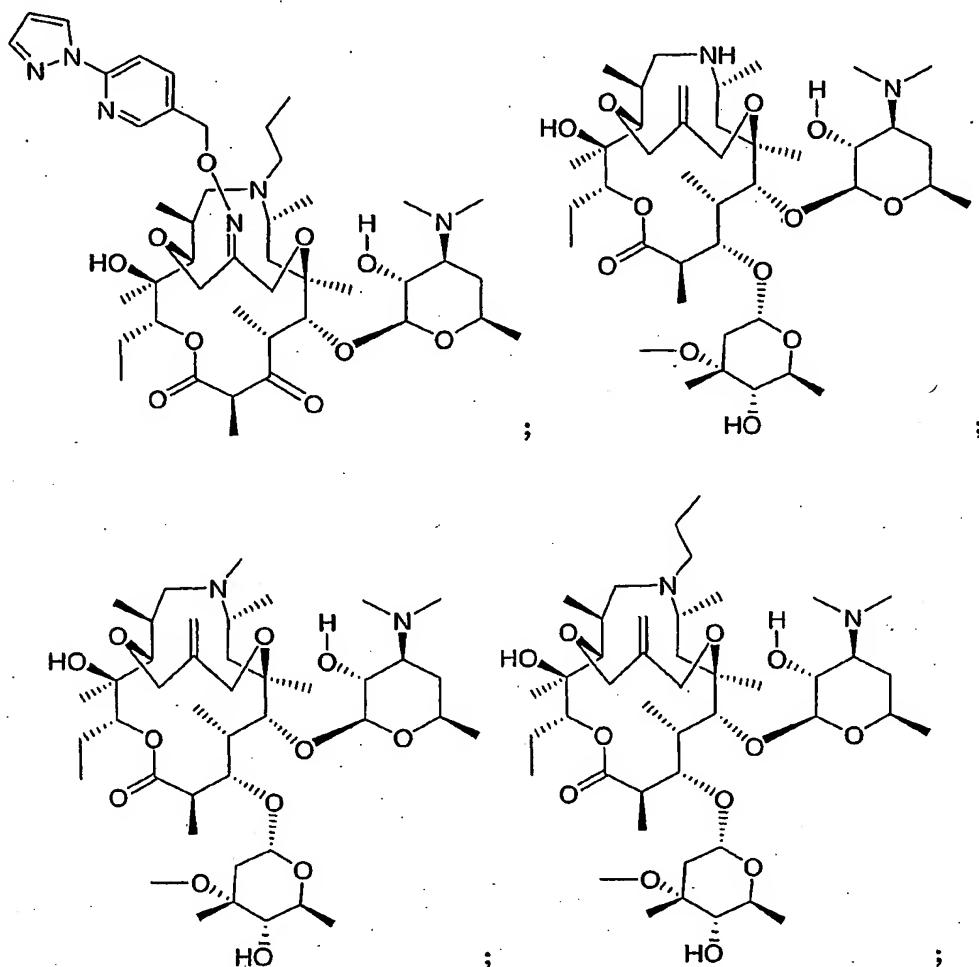
10 9. A compound according to claim 1, or a pharmaceutically acceptable salt or ester or prodrug thereof, selected from the group consisting of:

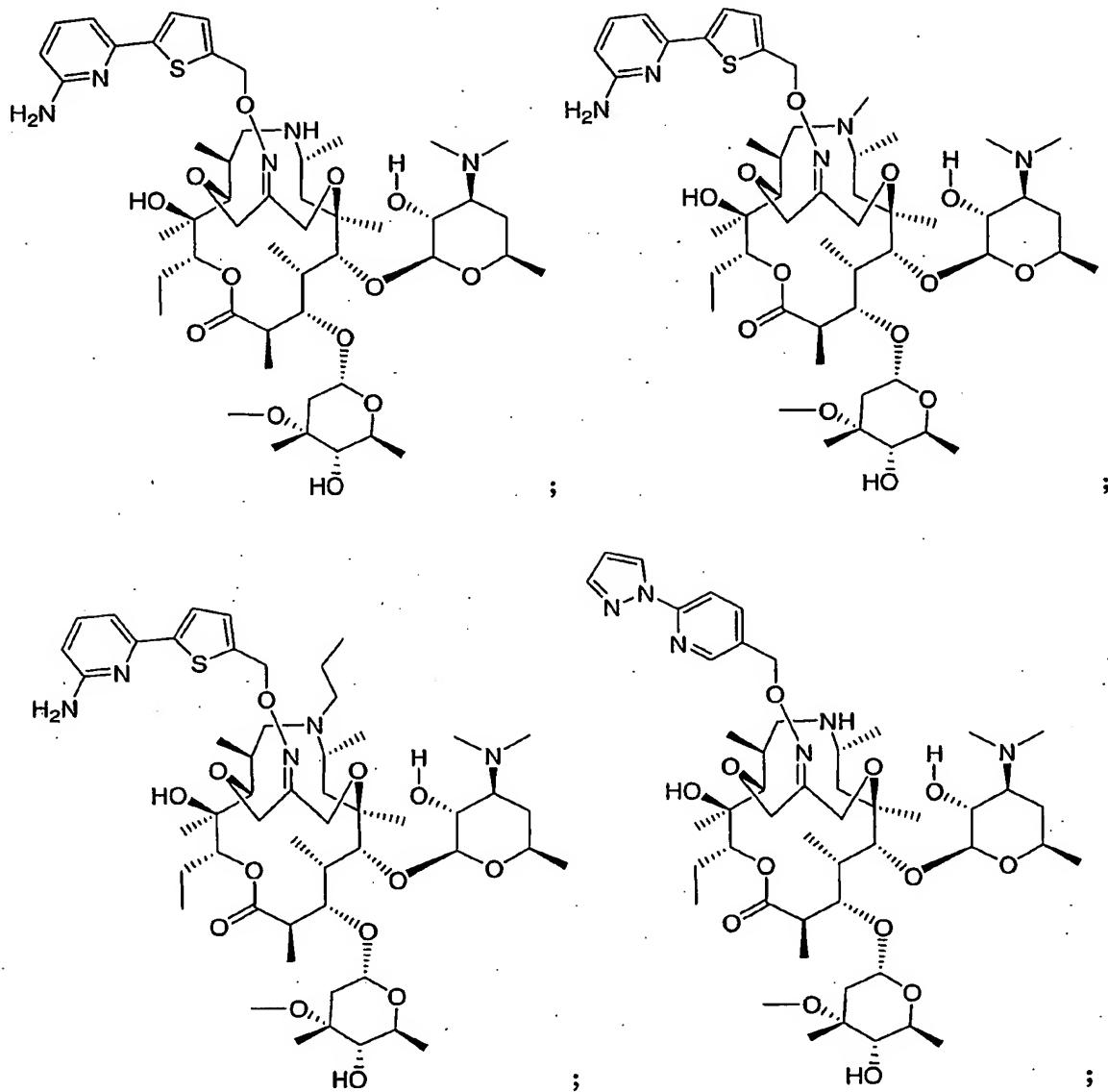


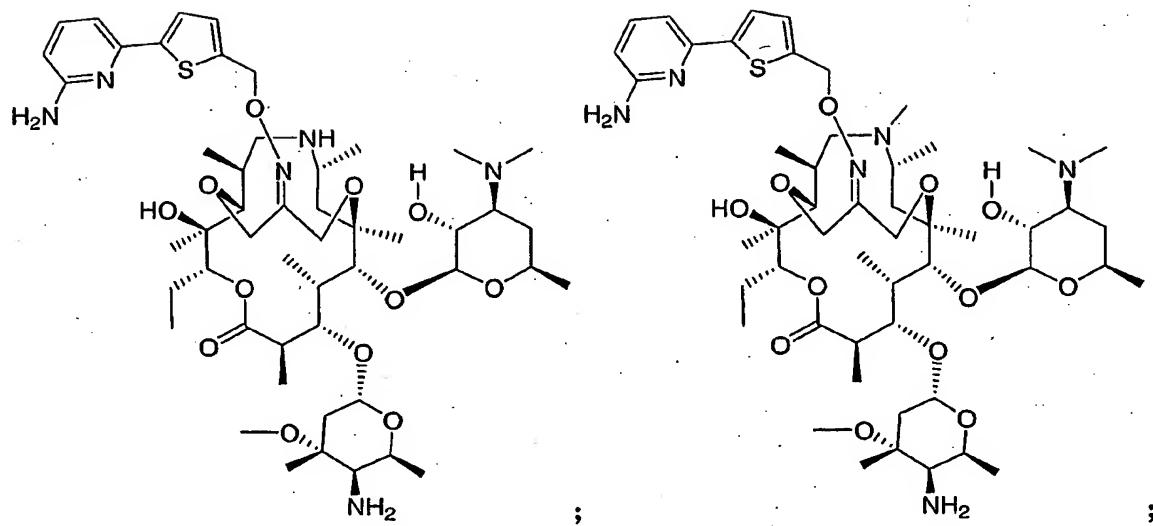
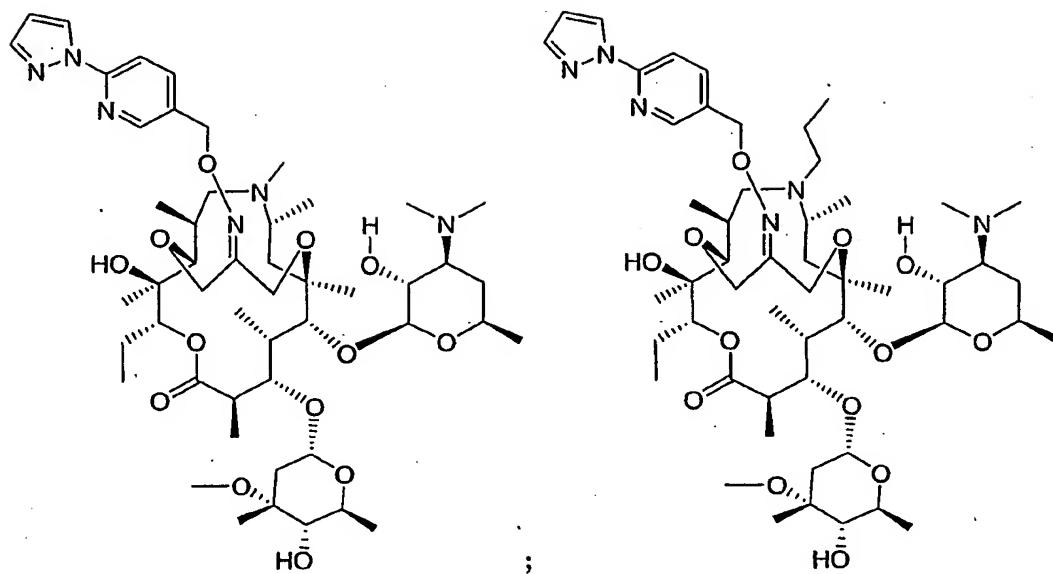


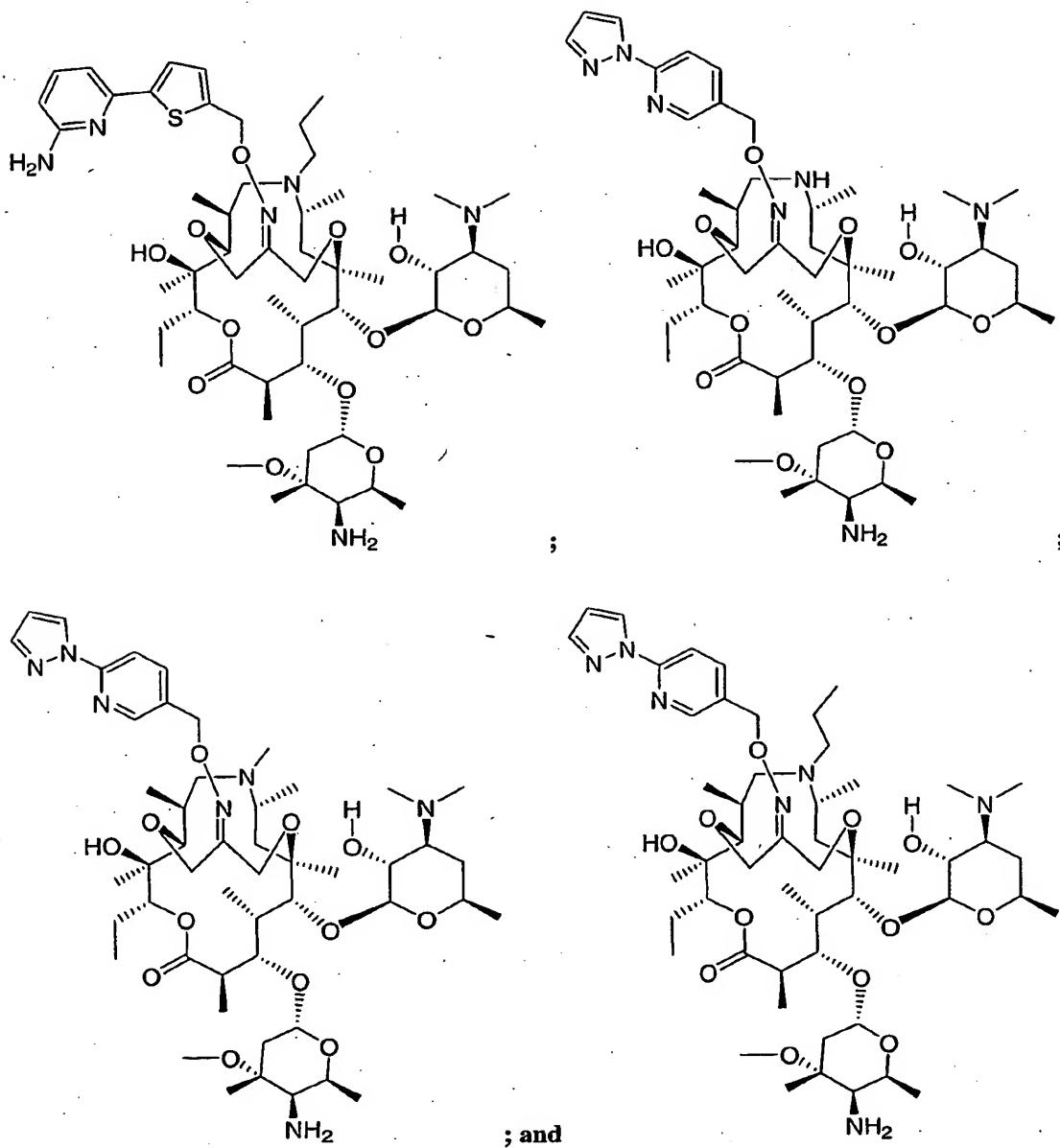












10. A pharmaceutical composition comprising:

5 (i) a compound of Formula I as defined in claim 1, or a pharmaceutically acceptable salt or ester or prodrug thereof, in an amount effective for treating or preventing a bacterial infection; and

(ii) a pharmaceutically acceptable carrier.

11. A pharmaceutical combination of

(i) a compound of Formula I as defined in claim 1, or a pharmaceutically acceptable salt or ester or prodrug thereof, and

5 (ii) an antibacterial agent other than a compound of Formula I or a salt, ester or prodrug thereof;

wherein the compound of Formula I or its pharmaceutically acceptable salt or ester or prodrug and the antibacterial agent are each employed in an amount that renders the combination effective for treating or preventing a bacterial infection.

10

12. A method for treating or preventing a bacterial infection in a subject in need thereof, which comprises administering to the subject a therapeutically or prophylactically effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or ester or prodrug thereof.

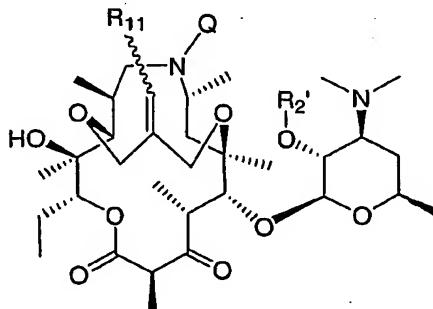
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13. A method for treating or preventing a bacterial infection in a subject in need thereof, which comprises administering to the subject a therapeutically or prophylactically effective amount of a pharmaceutical composition according to claim 10.

20

14. A method for treating or preventing a bacterial infection in a subject in need thereof, which comprises administering to the subject a therapeutically or prophylactically effective amount of a pharmaceutical combination according to claim 11.

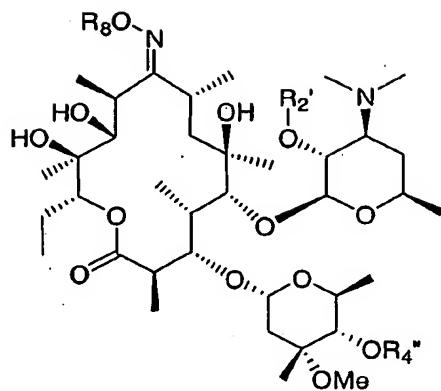
15. A process for the preparation of a compound of formula:



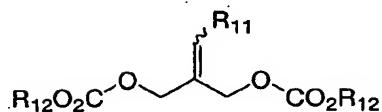
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wherein Q and R_{2'} are each as defined in claim 1, which comprises:

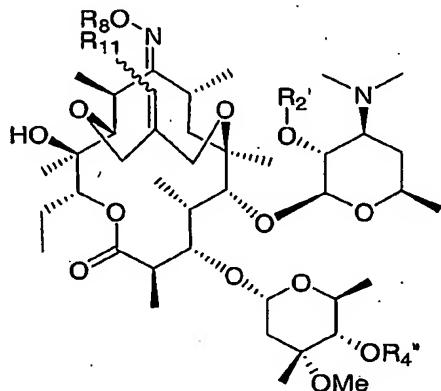
(1) reacting a compound of formula:



with an alkylating agent of formula:



in the presence of a phosphine ligand and Pd(O) catalyst under reflux conditions to prepare a compound of the Formula:



wherein:

R8 is

- 10 a. hydrogen,
- b. $-\text{CH}_2\text{O}(\text{CH}_2)_2\text{OCH}_3$,
- c. $-\text{CH}_2\text{O}(\text{CH}_2\text{O})_n\text{CH}_3$ where n is zero, 1 or 2;
- d. $-\text{C}_1\text{-C}_{12}$ alkyl, optionally substituted with one or more substituents selected from aryl, substituted aryl, heteroaryl and substituted heteroaryl;
- e. $-\text{C}_3\text{-Cl}_2$ cycloalkyl;
- 15 f. $-\text{C}(\text{O})\text{-C}_1\text{-C}_{12}$ alkyl;

- g. $-\text{C}(\text{O})-\text{C}_3\text{-C}_{12}$ cycloalkyl;
- h. $-\text{C}(\text{O})-\text{R}_1$, where R_1 is as previously defined; or
- i. $-\text{Si}(\text{R}_a)(\text{R}_b)(\text{R}_c)$, wherein R_a , R_b and R_c are each independently selected from $\text{C}_1\text{-C}_{12}$ alkyl, aryl and substituted aryl;

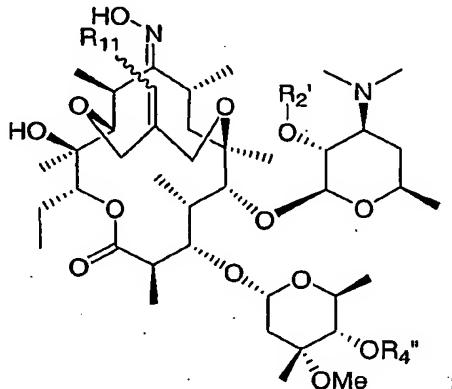
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R_2' and R_4'' are as previously defined in claim 1; and

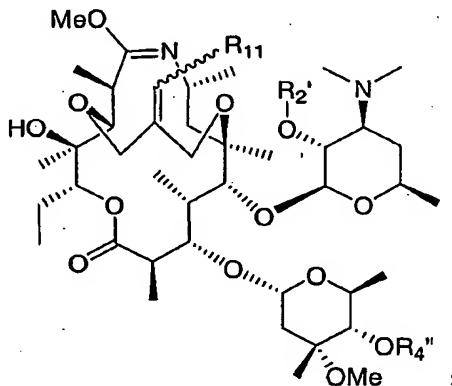
R_{11} is as defined in claim 1 and R_{12} is $\text{C}_1\text{-C}_{12}$ alkyl;

10

(2) treating the compound obtained in step (1) with an aqueous base to obtain the Z-oxime of formula:

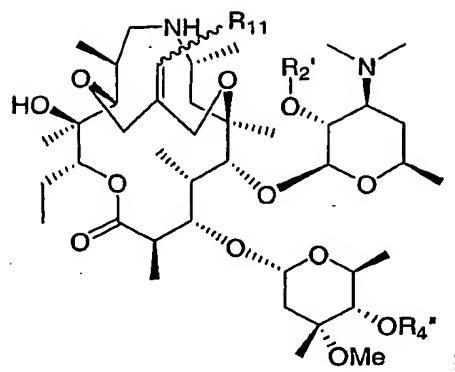


(3) reacting the compound prepared in step (2) with an oxime activating agent and quenching with methanol to prepare a compound of formula:

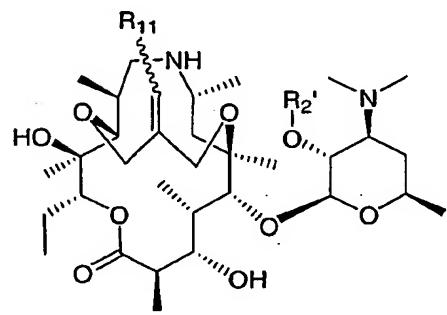


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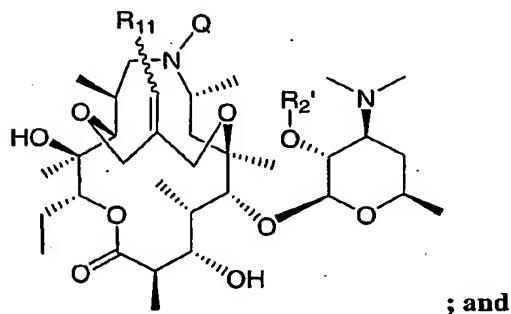
(4) reacting the compound prepared in step (3) with a reducing agent to prepare compound of formula:



(5) reacting the compound prepared in step (4) with a mild acid to prepare a compound of formula:

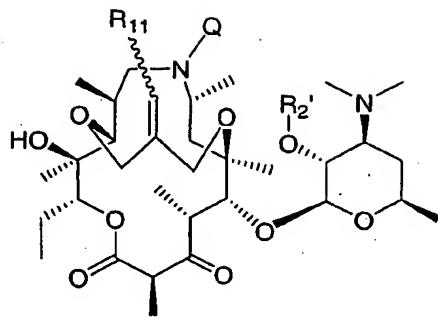


5 (6) reacting the compound prepared in step (5) with an agent containing the group Q selected from the group consisting of an alkylating agent, an alkyl halide in the presence of a base, and an aldehyde via reductive amination in the presence of NaCNBH_3 to prepare a compound of formula:

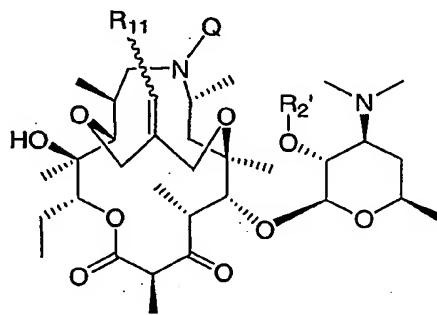


10 (7) oxidizing the hydroxyl in the 3 position of the compound prepared in step (6) via Dess-Martin oxidation, Corey-Kim oxidation, or a Moffat oxidation to prepare a

compound of formula:



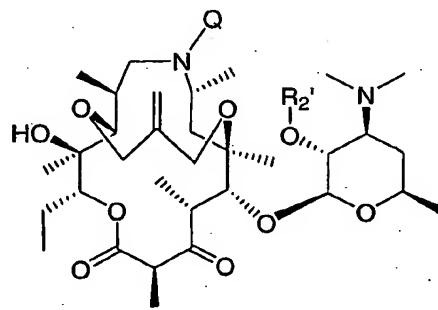
16. A process of preparing compounds of formula:



5

which comprises

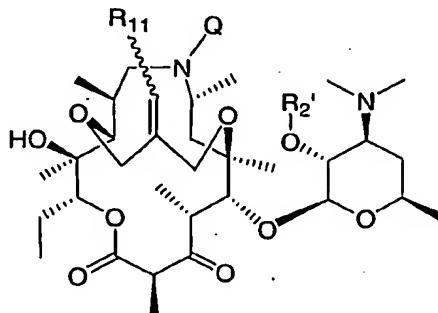
(a) reacting a compound of formula:



10 with $\text{CH}_2=\text{CH}-\text{R}_{11}$ in the presence of a ruthenium catalyst;

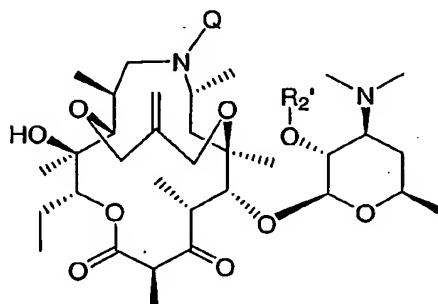
wherein Q, R_2' , and R_{11} are each as defined in claim 1.

17. A process of preparing compounds of formula:



which comprises

(a) reacting a compound of formula:

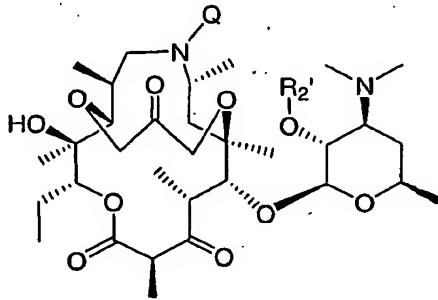


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with R11-halide under Heck coupling conditions using a palladium catalyst optionally with a phosphine ligand;

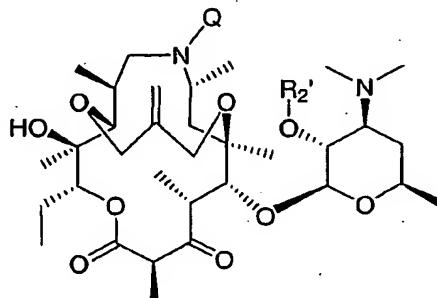
10 wherein Q and R2' are each as defined in claim 1; and R11 is aryl, substituted aryl, or C1-C6 alkyl substituted with aryl or substituted aryl.

18. A process of preparing a compound of the Formula:



which comprises:

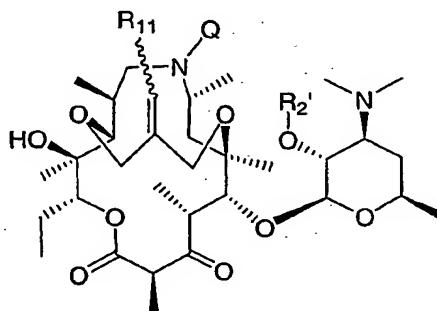
(a) performing ozonolysis on a compound of formula:



wherein Q and R2' are each as defined in claim 1.

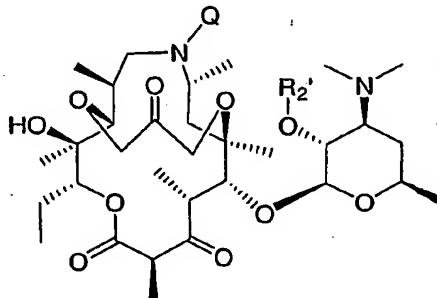
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19. A process of preparing a compound of formula:



which comprises:

10 (a) reacting a compound of formula:

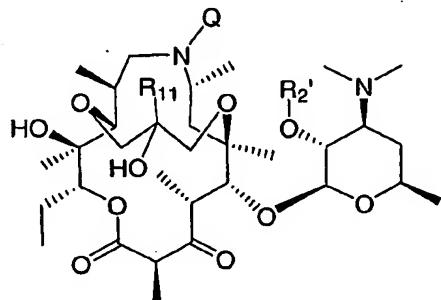


with a phosphoylid under Wittig conditions;

wherein Q, R2', and R11 are as defined in claim 1.

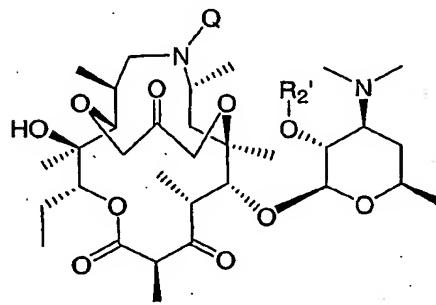
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20. A process of preparing a compound of formula:



which comprises:

(a) reacting a compound of formula:



5

with a Grignard reagent containing the R11 group;

wherein Q, R2', and R11 are as defined in claim 1.